

Building Community Capacity to Address Local Air Toxics Issues

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Background

- WE ACT: Environmental health & justice organization based in Harlem, NYC
- Emerged in 1988 out of community struggles surrounding North River Sewage Treatment Facility
- Focus on government accountability, community-based research, youth empowerment, community education, and promoting sustainable land uses.

Community-Driven Research on Air Pollution

- Sidewalk-level Fine Particulates and Diesel Exhaust Particles (1996, published 2000)
 - ◆ $PM_{2.5}$, Elemental Carbon and traffic counts at 4 Harlem intersections
 - ◆ EC varies with diesel truck counts
- Manhattan Community-Based Particulate Study: Northern Manhattan (US EPA Region 2) 1997
 - ◆ Responding to community concerns
 - ◆ PM_{10} and $PM_{2.5}$ monitors in resident-identified hotspots

Earth Crew with traffic counters



Earth Crew members (from left to right: Carl Willis, David Betancourt, Latanya Stevens and Felicia Reynolds) keep a close watch as they count the number of diesel buses and trucks rolling down the streets of Northern Manhattan.

Current Efforts

- EMPACT grant
 - ◆ Real-time monitoring and reporting of PM_{2.5}, ozone, and black carbon in Harlem and Washington Heights
- Traffic-Related Particle Exposures Among New York City Adolescents
 - ◆ Test for an association between daily PM_{2.5}, black carbon & asthma morbidity in schools.
 - ◆ Before and after diesel depot monitoring

Building Effective Partnerships

- WE ACT initially approached Columbia and EPA Region 2 about assessing exposure to and potential health effects of diesel bus depots
- Developed relationships with many researchers focusing on local concerns: ambient and indoor air quality, asthma
- Building community capacity
 - ◆ Develop a core of residents & community leaders versed in scientific concepts and monitoring tools

Environmental Health Leadership Training

- ◆ Sources
- ◆ Fate & Transport: How Pollution Moves
- ◆ Health Effects
- ◆ Cumulative Exposure & Vulnerable Populations
- ◆ Relevant Standards & Regulations
- ◆ Monitoring Tools
- ◆ Incorporating Data into Community Advocacy
- ◆ The Long-Term Picture: Sustainability in Research

Building Capacity: Needs

- Committed Research Partners
 - ◆ Willingness to provide “expert” testimony for local campaigns
- Funding!
 - ◆ Long-term, not just project-based
- *** Internal Capacity ***
 - ◆ “In-House” expertise on technical issues
 - ◆ Decreases dependence on external “experts”
 - ◆ Imported vs. “home-grown”: fostering youth & local empowerment
 - ◆ House research assistant in the CBO

Building Community Capacity: Needs

- Research efforts contribute to community vision and CBO activities (Community organizations are not consulting companies)
- Appropriate Communication Mechanisms
 - ◆ Plain Language (English or other)
 - ◆ Local papers, radio, TV
 - ◆ Community Meetings & Informal Networks

UPTOWN EYE

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ALL CHOKED UP:

Diesel Exhaust Exposure Among Adolescents in Harlem

by Joanne Yankura, MPH and
Mary Northridge, Ph.D.

In 1998 concern was raised by members of the Harlem community when the Manhattanville bus depot was constructed on 139th Street, directly across from Intermediate School 43 in West Harlem. It was the sixth bus depot operated by the Metropolitan Transportation Authority (MTA) constructed in a Northern Manhattan neighborhood - a seventh depot is located on 59th Street.

In 1994, WE ACT approached investigators at the Harlem Center for Health Promotion and Disease Prevention to request their assistance in determining what impact diesel exhaust might have on the community's health, especially on the respiratory health of its youth, a heavily exposed and vulnerable population. As a result, a study was designed in order to determine the background exposure levels to diesel exhaust and to measure baseline lung function of school aged Harlem youth.

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Technical Needs

- Assess actual exposures and cumulative impact
 - ◆ Urban communities: multiple sources of pollutants. “Toxic soup” effect.
- Transfer monitoring tools, reference material to community organizations
- Training
 - ◆ E.g. Title V
 - ◆ Air Toxics / HAPs
 - ◆ Clean Air Act

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- Dr. Mary Northridge, Mailman School of Public Health
- Ray Werner, US EPA Region 2, Air Monitoring Division

References

Kinney PL, Aggarwal M, Northridge ME, Janssen NA, Shepard P. **Airborne concentrations of PM(2.5) and diesel exhaust particles on Harlem sidewalks: a community-based pilot study.** *Environ Health Perspect* 2000;108:213-8.

Northridge ME, Kinney PL, Chew GL, Shepard P, Corbin-Mark C, Graziano J. **Community Outreach and Education Program (COEP) at the NIEHS Center for Environmental Health in Northern Manhattan: the basis for conducting scientifically valid, socially relevant research.** *Environ Epidemiol Toxicol* 2000;2:142-50.

American Lung Association. **Urban Air Pollution and Health Inequities: A Workshop Report.** *Environ Health Perspect* 2001; 109 (supplement 3): 357-74.